

## PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>P 24285 PC 00</b>	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. <b>PCT/NO2004/000088</b>	International filing date (day/month/year) <b>26.03.2004</b>	Priority date (day/month/year) <b>01.04.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>E21B 17/02, E21B 23/14</b>		
Applicant <b>Smedvig Offshore AS et al</b>		

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 3 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
  - ☒ (sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:
    - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

- This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

Date of submission of the demand <b>02.02.2005</b>	Date of completion of this report <b>19.05.2005</b>
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer  <b>Björn Lindkvist / MRO</b> Telephone No. +46 8 782 25 00

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NO2004/000088

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1 - 11 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- pages\* 1 - 3 \_\_\_\_\_ received by this Authority on 02.02.2005
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- pages 1 - 9 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NO2004/000088

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	<u>1-10</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-10</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-10</u>	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

This report has been based on the new claims 1-10 filed with the letter of 2005-02-02.

The claimed invention

The claimed invention relates to a device for connection of a wire line provided with a conductor, the wire line being intended particularly for a wire line tool, wherein the wire line is provided with a wire line connector in which each wire line strand layer is biased and clamped between an inner sleeve and an outer sleeve, and wherein the tensile load of the wire line is transmitted to a fastening element via the outer sleeves, the wire line connector being connected to the wire line tool by means of a releasable disconnection device.

The following documents have been cited in the International Search Report

D1: US 6431269 B1  
D2: US 4464812 A  
D3: US 5810088 A  
D4: US 6032733 A  
D5: US 4275786 A

The documents cited in the International Search Report represent the prior art. The claimed invention stated in claims 1-10 is not considered to be anticipated by these documents. None of the documents or any relevant combination of them reveals a device for connection of a wire line provided with a conductor as described by these claims.

According to the arguments stated above, the invention claimed in claims 1-10 is novel, considered to involve an inventive step and has industrial applicability.

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## C l a i m s

1. A device for connection of a wireline (2) provided with a conductor (10), characterized in that the wireline (2) is provided with a wireline connector (6) in which each wireline strand layer (12, 14) is biased and clamped between an inner sleeve (16, 26) and an outer sleeve (18, 28), and wherein the tensile load of the wireline (2) is transmitted to a fastening element (38) via the outer sleeves (18, 28).
2. The device according to claim 1, characterized in that the outer sleeve (18, 28) is provided with a biasing, radial deformation.
3. The device according to claim 1, characterized in that a spacer sleeve (36) is arranged between the outer sleeves (18, 28).
4. The device according to claim 1, characterized in that a wedge sleeve (22, 32) is biased and displaced axially between the outer sleeve (18, 28) and the inner sleeve (16, 26).
5. The device according to claim 4, characterized in that the spacer sleeve (36) is arranged between a second outer sleeve (28) and a first wedge sleeve (22).
6. A device for connection, by means of a wireline connector (6), of a wireline (2) provided with a conductor (10),

the wireline (2) being intended particularly for a wireline tool (4), and where the wireline connector (6) is connected to the wireline tool (4) by means of a releasable disconnection device (8), characterized in that the disconnection device (8) comprises at least one locking body (44), wherein the locking body (44) in its locking position is in locking engagement with the wireline connector (6) and the disconnection device (8) while a body (73) prevents the locking body (44) from being displaced out of its locking position, and wherein the body (73) is arranged to displace out of its locking position by means of a biased spring (56).

7. The device according to claim 6, characterized in that the body (73) is comprised of a collar that is connected to a piston-like body (62), the spring (56) biasing against the piston-like body (62), and wherein the piston-like body (62) is restrained by at least one electrically insulated wire (64), and wherein the wire (64) upon heating is arranged to lose its load-carrying ability.

8. The device according to claim 7, characterized in that the wire (64) is heated by means of electric energy.

9. The device according to claim 7, characterized in that the wire (64) is heated by means of chemical energy.

10. The device according to claim 6, characterized in that disconnection device (8) comprises at

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least one locking body (44), wherein the locking body (44) in its locking position is in locking engagement with the wireline connector (6) and the disconnection device (8) while the locking body (44) is bearing against a movable tapered section (78) that is biased in its movement direction by a spring (76).